REPORT OF SUBSIDENCE SURVEY

JACKPILE MINE

LAGUNA, NEW MEXICO

PREPARED BY MARMON ENGINEERING SURVEYS

Laguna, New Mexico

February 2, 1976

ABSTRACT:

A second order survey of thirty-four (34) points above present and projected tunneling associated with uranium mining activity.

All points involved in the subsidence survey are punched brass disks set in concrete, with the concrete monument projecting an average of twenty-four inches below the ground line.

For a base of control outside the area of projected subsidence, a first order quadrilateral was developed (see Fig. 1) for use in subsequent surveys.

Origin of coordinates and elevation for the project is based upon published coordinates for Tristation FM-19:

N: 1001934.160 E: 988486.480
Elev: 6438.664

Positional accuracy in northing and easting is projected as ± 0.025' (major axis of error ellipse) and ± 0.004' for elevations listed.

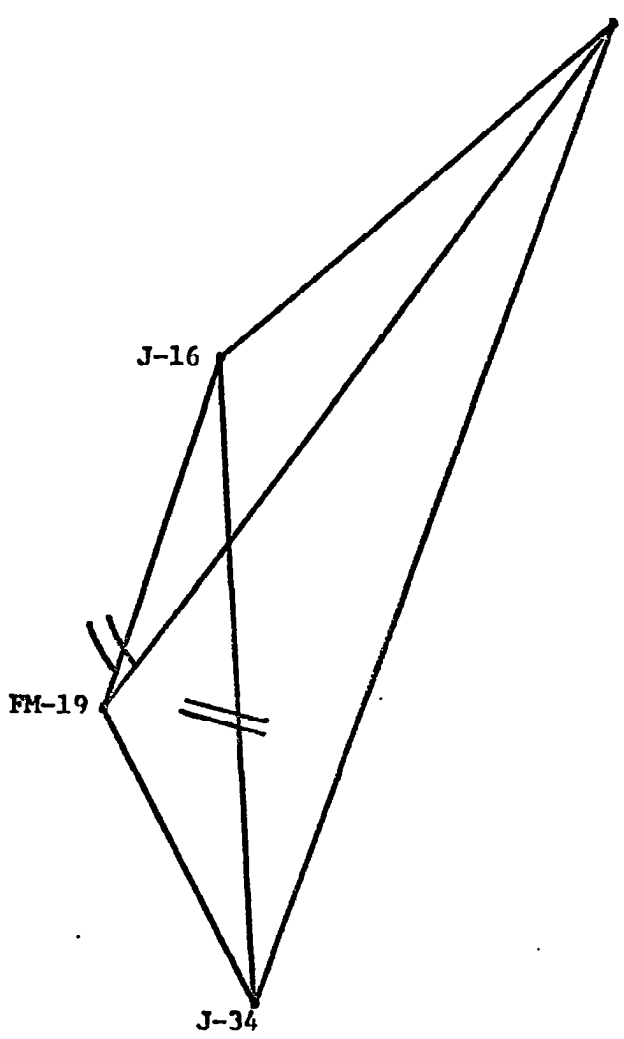
Date of survey is period January 23rd to February 3rd, 1976.

ANACONDA SUBSIDENCE SURVEY PROGRAM
JACKPILE MINE, LAGUNA, NEW MEXICO

POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
1N	1001855.808000	990225.720000	2N	1001877.383000	990128.213000
3N	1001898.995000	990030.618000	4N	1001921.721000	989933.331000
5N	1001941.949000	989835.653000	6N	1001963.563000	989738.017000
7N	1001985.048000	989640.817000	8N	1002006.574000	989543.215000
9N	1002029.772000	989445.980000	10N	1002057.904000	989350.333000
11S	1001911.929000	989317.562000	12S	1001883.652000	989413.313000
13S	1001860.517000	989510.569000	14S	1001838.964000	989608.156000
15S	1001817.462000	989705.581000	16S	1001795.905000	989803.063000
17S	1001774.463000	989900.596000	18S	1001752.915000	989998.183000
19S	1001731.347000	990095.654000	20S	1001709.817000	990193.223000
21E	1002413.915000	988801.632000	22E	1002488.069000	988735.171000
23E	1002567.974000	988675.106000	24E	1002651.983000	988621.025000
25E	1002739.832000	988573.319000	26E	1002831.022000	988532.215000
27E	1002925.968000	988498.705000	28W	1002820.744000	988322.298000
29W	1002727.672000	988358.820000	30W	1002637.271000	988401.342000
31W	1002549.646000	988449.424000	32W	1002465.376000	988503.132000
33W	1002384.681000	988562.138000	34W	1002307.966000	988626.175000

POINT	ELEVATION	POINT	ELEVATION
1N	6281.611	2N	6288.550
3N	6293.597	4N	6303.779
5N	6315.679	6N	6313.817
7N	6325.274	8N	6333.117
9N	6346.807	10N	6356.419
11S	6364.244	12S	6355.790
13S	6349.487	14S	6349.066
15S	6329.382	16S	6319.279
17S	6317.522	18S	6311.188
19S	6303.924	20S	6297.436
21E	6374.552	22E	6374.411
23E	6370.097	24E	6372.278
25E	6375.064	26E	6375.344
27E	6362.668	28W	6382.056
29W	6389.707	30W	6396.273
31W	6390.166	32W	6396.564
33W	6397.531	34W	6395.114

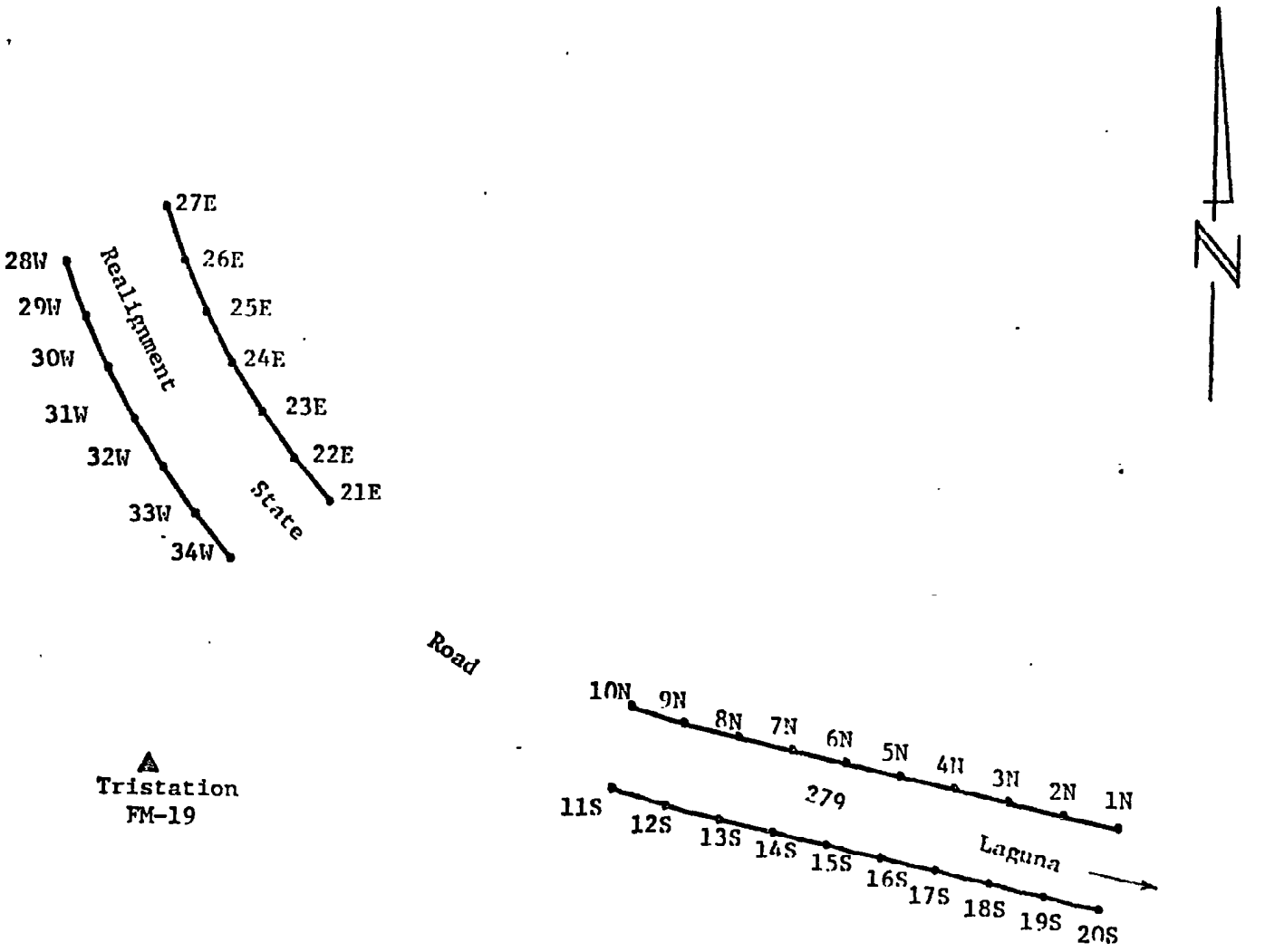
FIGURE 1: Control Quadrilateral for Subsidence Survey



Sta.	N	E
J-9	1009340.049	993787.109
J-16	1005700.341	989627.902
FM-19	1001934.160	988486.480
J-34	998846.909	990165.105

SCALE: 1" = 2000'

FIGURE 2: Configuration of Subsidence Stations



SCALE: 1" = 300'

CERTIFICATION

This is to certify that the data contained within this report was derived from actual field surveys made by me or under my supervision, that all data is conformal to the specifications stated herein, and that the same is true and correct to the best of my knowledge and belief.

Fred D. Marmon, Registered Land Surveyor, Certificate No. 2031

1st QUARTER RESURVEY
REPORT OF SUBSIDENCE SURVEY
JACKPILE MINE
LAGUNA, NEW MEXICO

PREPARED BY MARMON ENGINEERING SURVEYS

Laguna, New Mexico

April 1, 1976

April 1st resurvey of subsidence stations, Jackpile Mine, Laguna, NM
Survey performed March 28 - April 1st, 1976.

Station	Northing	Easting	Delta initial survey N	E
1N	1001855.830	990225.745	+.022	+.025
2N	1001877.362	990128.158	-.021	-.055
3N	1001898.978	990030.597	-.017	-.021
4N	1001921.705	989933.285	-.016	-.046
5N	1001941.962	989835.628	+.013	-.025
6N	1001963.575	989738.023	+.008	+.006
7N	1001985.035	989640.816	-.013	-.001
8N	1002006.571	989543.210	-.003	-.005
9N	1002029.757	989446.046	-.015	+.066
10N	1002057.899	989350.333	-.005	-.000
11S	1001911.958	989317.553	+.029	-.009
12S	1001883.654	989413.313	+.002	-.000
13S	1001860.540	989510.563	+.023	-.006
14S	1001838.959	989608.146	-.005	-.010
15S	1001817.437	989705.580	-.025	-.001
16S	1001795.947	989803.039	+.042	-.024
17S	1001774.513	989900.562	+.050	-.034
18S	1001752.884	989998.147	-.031	-.036
19S	1001731.369	990095.593	+.022	-.061
20S	1001709.822	990193.207	+.005	-.016

Station	Northing	Easting	Delta initial survey N	Delta initial survey E
21E	1002413.879	988801.646	-.036	+.014
22E	1002488.090	988735.153	+.021	-.018
23E	1002567.993	988675.094	+.019	-.012
24E	1002651.972	988621.003	-.011	-.022
25E	1002739.826	988573.331	-.006	+.012
26E	1002831.036	988532.232	+.014	+.017
27E	1002925.992	988498.689	+.024	-.016
28W	1002820.788	988322.286	+.044	-.012
29W	1002727.701	988358.830	+.029	+.010
30W	1002637.296	988401.339	+.025	-.003
31W	1002549.649	988449.415	+.003	-.009
32W	1002465.376	988503.123	-.000	-.009
33W	1002384.672	988562.123	-.009	-.015
34W	1002307.984	988626.172	+.018	-.003

LEVEL NET

Station	Elevation	Delta initial survey
1N	6281.596	-.015
2N	6288.533	-.017
3N	6293.574	-.023
4N	6303.752	-.027
5N	6315.654	-.025
6N	6313.801	-.016
7N	6325.256	-.018
8N	6333.108	-.009
9N	6346.801	-.006
10N	6356.407	-.012
11S	6364.238	-.006
12S	6355.783	-.007
13S	6349.484	-.003
14S	6349.060	-.006
15S	6329.379	-.003
16S	6319.276	-.003
17S	6317.523	+.001
18S	6311.187	-.001
19S	6303.917	-.007
20S	6297.425	-.011
21E	6374.522	-.030
22E	6374.390	-.021
23E	6370.070	-.027
24E	6372.254	-.024
25E	6375.038	-.026
26E	6375.330	-.014
27E	6362.628	-.040
28W	6382.054	-.002
29W	6389.711	+.004
30W	6396.274	+.001
31W	6390.168	+.002
32W	6396.570	+.006
33W	6397.536	+.005
34W	6395.115	+.001

CERTIFICATION

This is to certify that the data contained within this report was derived from actual field surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Fred D. Marmon

Fred D. Marmon, Registered Land Surveyor, Certificate No. 2031

April 1st, 1976

RECEIVED
2-16-76
EC

State of New Mexico
Environmental Improvement Agency

BACTERIOLOGICAL WATER REPORT

TRB
EAL

(2)

Town Jackpile-Minesite Code # _____ County Valencia Code # 32W

Date Collected 2-11-76 Collected By Pat Fitch

Location No. _____ Chlorinated YES ☐ NO ☐ Residual _____

Owner of System The Anaconda Co pH _____

Collection Point Jackpile P-10 Mine Well

PUBLIC ☐ SEMI-PUBLIC ☐ PRIVATE ☒ SWIMMING POOL ☐ W.P.C. ☐ SPECIAL ☐

Stream/Lake Name _____

Sewage/Industrial Plant Name _____

River Basin: RIO GRANDE ☒ PECOS ☐ SAN JUAN ☐ GILA ☐ CANADIAN ☐

LITTLE COLORADO ☐ OTHER _____

SANITARY SURVEY COMPLETED— YES ☐ NO ☐

CHECK TEST REQUIRED: POTABILITY; COLIFORM GROUP, MEMBRANE FILTER ☒

STANDARD PLATE COUNT ☐ FECAL COLIFORM ☐ FECAL STREPTOCOCCI ☐

Re-Sample No. _____ Other _____

SEND REPORT TO THE FOLLOWING (NAME & ADDRESS)

T. R. Beck, Manager
The Anaconda Co
P O Box 638
Grants, N. M. 87020

2/11/76 — 16226
Date Received — Lab No.

RESULTS OF TESTS FOR COLIFORM GROUP

Volume	Presumption 24 Hours	Presumption 48 Hours	Confirmed 24 Hours	Confirmed 48 Hours	Completed
10 ml.					
10 ml.					
10 ml.					
10 ml.					
10 ml.					

CONFORMS ☐ DOES NOT CONFORM ☐ WITH DRINKING WATER STANDARDS

Coliform Colonies (MF) 0 /100 ML.

Standard Plate Count, 35°c _____ /ML.

Fecal Coliform (MF) _____ /100 ML.

Fecal Streptococci (MF) _____ /100 ML.

Other _____

Date Reported 2/12/76

1. Please give full information to avoid delay in report. 2. Type or print with pencil or ball point pen. 3. See back of first copy for important information.
4. No sample shall be accepted until a sanitary survey by a representative of the Environmental Improvement Agency has been made and such sampling authorized.

EIA 005 Form Issued 11/73 (Replaces LAB 005) (over)

RECEIVED
2-9-76
64201

State of New Mexico
Environmental Improvement Agency

mine samples should show who collected them

BACTERIOLOGICAL WATER REPORT

TRB
EAL
WEL

Town Jackpile Minesite Code 32W County Valencia

Date Collected 2 - 2 - 76 Collected By Pat Fitch

Location No. _____ Chlorinated YES ☐ NO ☒ Residual _____

Owner of System The Anaconda Company pH _____

Collection Point Jackpile New Shop

PUBLIC ☐ SEMI-PUBLIC ☐ PRIVATE ☒ SWIMMING POOL ☐ W.P.C. ☐ SPECIAL ☐

Stream/Lake Name _____

Sewage/Industrial Plant Name _____

River Basin: RIO GRANDE ☒ PECOS ☐ SAN JUAN ☐ GILA ☐ CANADIAN ☐

LITTLE COLORADO ☐ OTHER _____

SANITARY SURVEY COMPLETED— YES ☐ NO ☐

CHECK TEST REQUIRED: POTABILITY; COLIFORM GROUP, MEMBRANE FILTER ☒

STANDARD PLATE COUNT ☐ FECAL COLIFORM ☐ FECAL STREPTOCOCCI ☐

Re-Sample No. _____ Other _____

SEND REPORT TO THE FOLLOWING (NAME & ADDRESS)

Mr. T. R. Beck, Manager
The Anaconda Company
P. O. Box 638
Grants, New Mexico 87020

2/11/76 — 15383
Date Received — Lab No.

RESULTS OF TESTS FOR COLIFORM GROUP

Volume	Presumption 24 Hours	Presumption 48 Hours	Confirmed 24 Hours	Confirmed 48 Hours	Completed
10 ml.					
10 ml.					
10 ml.					
10 ml.					
10 ml.					

CONFORMS ☐ DOES NOT CONFORM ☐ WITH DRINKING WATER STANDARDS

Coliform Colonies (MF) 0 /100 ML.

Standard Plate Count, 35°c _____ /ML.

Fecal Coliform (MF) _____ /100 ML.

Fecal Streptococci (MF) _____ /100 ML.

Other _____

Date Reported 2-9-76 Ch

1. Please give full information to avoid delay in report. 2. Type or print with pencil or ball point pen. 3. See back of first copy for important information.
4. No sample shall be accepted until a sanitary survey by a representative of the Environmental Improvement Agency has been made and such sampling authorized.

EIA 005 Form Issued 11/73 (Replaces LAB 005) (over)

THE ANACONDA COMPANY
WATER ANALYSIS

DESCRIPTION	Date	Cl ppm	SO_4 ppm	NO_3 ppm	Na ppm	Cond umhos	pH	U-Nat pCi/l	Ra-226 pCi/l	Th-230 pCi/l
Jackpile P-10 Well	2-5	24	539	2	470	1600	8.1	1.5	0.2	1.0
Jackpile New Shop Well	2-5	28	613	1	515	1500	8.1	1.4	1.0	1.5

WATER PUMPED

	Gallons
P-10 Well	2,400,000
New Shop Well	270,000
P-10 Mine	3,600,000

/sr/4-22-76